

1. An energetic thermoplastic elastomer, comprising:

A blocks terminated with isocyanate-reactive groups derived from monomers comprising one or more oxetane derivatives, the A blocks being crystalline below about 60°C;

B blocks terminated with isocyanate-reactive groups derived from monomers comprising at least one member selected from the group consisting of oxirane and derivatives thereof, the B blocks being amorphous above about -20°C; and

linking groups derived from at least one diisocyanate and at least one linking compound comprising two functional groups which are reactive with isocyanate moieties of the at least one diisocyanate.

43. An energetic thermoplastic elastomer, comprising:

A blocks terminated with isocyanate-reactive groups derived from monomers comprising at least one member selected from the group consisting of 3,3-bis(ethoxymethyl)oxetane, 3,3-bis(chloromethyl)oxetane, 3,3-bis(methoxymethyl)oxetane, 3,3-bis(fluoromethyl)oxetane, 3,3-bis(acetoxymethyl)oxetane, 3,3-bis(hydroxymethyl)oxetane, 3,3-bis(methoxyethoxymethyl)oxetane, 3,3-bis(iodomethyl)oxetane, 3,3-bis(nitratomethyl)oxetane, 3,3-bis(methylnitraminomethyl)oxetane, and 3,3-bis(azidomethyl)oxetane, the A blocks being crystalline below about 60°C;

B blocks terminated with isocyanate-reactive groups and comprising at least one member selected from the group consisting of glycidyl azide polymer and poly(glycidyl nitrate), the B blocks being amorphous above about -20°C; and

linking groups derived from at least one diisocyanate and at least one linking compound comprising two functional groups which are reactive with isocyanate moieties of the at least one diisocyanate.